

The Invention

The present invention enables cookies to retain a freshly baked character over a substantial portion of their shelf life. Freshly baked character in cookies is lost through a number of different mechanisms. However, the adverse result of these mechanisms is negated by the invention. Figure 1 depicts loss of flavor in the basecake portion of cookies over a storage period of eighty (80) days, a period of time which is well within the useful shelf life of commercially packaged cookies. In fact, tests have shown that in baked cookies about a third of the key vanilla flavor components may be lost in less than two months and about one half of key butter flavor components may be lost within a month, and a full 80% of the freshness aroma may be lost in as little as a week. See the Specification at page 7, lines 4-10. The present invention, however provides a vehicle for ameliorating this loss of freshman flavors. See, for example, Figure 2 which depicts the migration of a particular cookie flavor (vanilla) over a period of 26 weeks, from vanilla flavor enhanced chocolate chips into a cookie basecake. Through this mechanism, cookie freshness can be maintained.

The present invention is based on several discoveries. In one aspect of the invention, Applicants have discovered that flavor migration from relatively small enhanced flavor chips into cookie basecake is a process which can be utilized in the preparation of extended shelf life cookies. This flavor migration process to be effective requires that relatively small enhanced flavor chips be employed. While not being bound by a particular theory, Applicants believe that smaller chips with their inherently greater surface-to-volume ratios, as well as their more extensive coverage of a cookie basecake for a given weight of flavor chip, favor the migratory release of flavors in a homogeneous fashion. In other aspects, the invention involves the simultaneous presence of larger flavor chips, for their visual impact provides the appearance characteristics which consumers favor in chip-containing cookies.

The Amendments

The amendments are made for the purpose of correcting an obvious typographical error and to otherwise correct formal matters, and to better define the invention. The amendments are fully supported by the original disclosure and claims.

The amendment to claim 20 corrects a typographical error by deleting an extraneous numeral which was noted by the Examiner.

The amendment to claim 21 corrected an informality involving a proper antecedent basis, as was noted by Examiner.

The amendment to claim 23 was made to better define the invention. Support for the language added to claim 23 can be found, *inter alia*, in claim 8.

The 35 U.S.C. § 112 Rejection of Claims 6, 13, 15, 19, 20 and 21

Claims 6, 13, 15, 19, 20 and 21 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner states that the terminology "other flavors associated with freshness" and the term "caramel-like" which are found in these claims are indefinite because the scope of the claims can not be determined from this language.

This rejection is respectfully traversed. At page 10, lines 13-16, applicants recite a number of flavors which in the context of this invention are associated with freshness: buttery flavors, vanilla flavors, cream dairy flavors, and caramel-like flavors. At page 10, line 28 to page 16, line 2, applicants list other flavors providing freshness notes: demethylsulfide, ethyl butyrate, benzaldehyde, butyl butyryl lactate, oil of nutmeg and lemon oil. Having provided exemplary listings of flavors known to be associated with cookie freshness, those skilled in the art could readily identify other such flavors which would also be associated with freshness in cookies. Accordingly, the terminology should not be deemed indefinite.

Similarly, on page 10 at lines 26-27, applicants list a number of examples of caramel flavorings: vanillin, ethyl vanillin, gamma undecalactone, dihydro coumarin, caramel color and mixtures of two or more of the foregoing. Given these examples of caramel flavorings, the terminology "caramel-like" in reference to a flavoring is not indefinite and its meaning is understood by those skilled in the art.

The 35 U.S.C. § 102(b) Rejection of Claim 23

Claim 23 has been rejected under 35 U.S.C. § 102(b) as anticipated by Haynes et al., U.S. Patent 4,707,365. Haynes discloses a high impact chocolate flavor system which may be used in chocolate chips used in cookie formulation. The amendment to claim 23 which was made for the purpose of better defining the invention obviates this rejection.

The 35 U.S.C. § 103(a) Rejection of Claims 1-22 and 24-25

Claims 1-22 and 24-25 have been rejected under 35 U.S.C. § 103(b) as unpatentable over Haynes et al. The Examiner contends that it would have been obvious to one of ordinary skill in the art to combine small and larger chips depending on the taste and texture desired. The Examiner further contends that parameters such as the size of chips, the amount of chips employed in particular cookies, the use of various combination or large and small sizes of chips and other such parameters are all dependent on the taste and texture desired. Accordingly, the Examiner holds that the selection of particular parameter from among those available for chocolate chips would be obvious choices for those skilled in the art.

This rejection is respectfully traversed. An initial problem with the Examiner's position is that even if one were to concede that one skilled in the art might combine small and large chips to obtain a particular taste or texture, that is not Applicants' invention. Applications have achieved extended shelf in cookies containing flavor chips by taking advantage of flavor migration out of the smaller chips into the cookie basecake.

As compared to larger chips, smaller chips present a higher surface-to-volume ratio, and are more dispersed throughout a basecake dough, attributes which make small chips better sources within a cookie matrix for migratory flavors than would be a similar quantity of enhanced flavor contained within larger chips. However, this potential advantage of smaller chips as a source of migratory flavors was not appreciated in the art, and in fact the art in general looked on flavor migration as a disadvantage, not an advantage. See the discussion of Seiden et al., U.S. Patent 4,732,767 at page 3, lines 16-17 of Applicants' specification.

This combination of large chips and smaller chips with the smaller chips containing enhanced flavor as taught by Applicants is nowhere suggested in the Haynes reference. Moreover, the use of small enhanced flavor chips as a vehicle for adding flavor to a chip containing cookie and thereby extending cookie shelf life is a concept nowhere addressed, mentioned or remotely suggested by Haynes.

It is Applicants who made the non-obvious connection between the use of small enhanced flavor chips to carry migratory, shelf life extending flavors and the use of larger chips to convey the appearance characteristics associated with cookies containing inclusions.

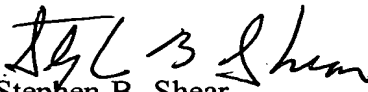
Conclusion

Applicants' invention is set out in the now pending claims in terms that fully comply with 35 U.S.C. § 112. Moreover, the now pending claims are neither anticipated by nor rendered obvious by the prior art. Accordingly, the application is believed to be in condition for allowance, and such action is earnestly solicited.

A "Version With Markings to Show Changes Made" is attached with respect to the amendments to the claims.

Respectfully submitted,

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Version With Markings to Show Changes Made

20. (Amended) A cookie according to claim 19, wherein [16] the chips are chocolate chips, the smaller chips have a count per pound of within the range of from about 7,500 to about 15,000 and the larger chips have a count per pound of from about 500 to about 7,500, and the flavor comprises at least one member selected from the group consisting of acetoin, acetol, acetyl methyl carbinol, benzaldehyde, butyl butyryl lactate, butyric acid, caproic acid, caramel color, delta decalactone, diacetyl, dihydro coumarin, dimethylsulfide, ethyl butyrate, ethyl vanillin, gamma undecalactone, gamma nonalactone, heliotropin, lemon oil, lipolized butter fat, maltol, maple lactone, oil of nutmeg, vanilla bean extract, vanillin and mixtures of two or more of these, and wherein the weight ratio of the average weight of the smaller chips on a number average to the weight of the larger chips on a number average is from 1:2 to 1:25.

21. (Amended) A process for preparing cookies having an extended shelf life, the process comprising: preparing a cookie dough comprising at least one added flavor; and adding to the dough small enhanced flavor chips, said chips comprising said at least one added flavor composition in an amount effective to extend the shelf life of the cookie by migrating from the chip to [the] a base cake portion formed by baking the dough.

23. (Amended) A cookie containing chips having an extended shelf life, comprising: a continuous cookie base cake having dispersed therein [small enhanced flavor chips] a mixture of chips of different sizes, some small some larger, and at least some of said small chips, comprising at least one flavor in a concentration greater than normally employed in flavor chips.